

REMARKS

Upon entry of this amendment, claims 1-22 are all the claims pending in the application. Claims 1-5, 7-9, 12-14, 18-19 and 21-22 have been rewritten to some extent only for improved conformance with US practice. It is respectfully submitted that these conformity-related amendments have not narrowed the scope of the claims in any way, and do not constitute any impermissible new matter.

I. Preliminary Matters

Applicant thanks the Examiner for initialing the references listed on form PTO-1449 and form PTO/SB/08 A & B submitted with the Information Disclosure Statements filed on May 30, 2000 and July 30, 2003, respectively.

II. Claim Rejections under 35 U.S.C. § 102(e)

Claims 1-3, 5-9, 12, 15, 17, 18-22 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,477,164 to Vargo et al. (hereinafter “Vargo”). Applicant respectfully traverses this rejection, in view of the comments which follow.

As claims 1, 7 and 18 are independent, the other rejected claims being dependent, this response focuses initially on claims 1, 7 and 18. Claim 1 recites a unique combination of elements not found in the cited reference. For example, claim 1 recites a superpacket serving as a switching unit of said relay means with a length n time greater than a fixed-length cell. Applicant respectfully submits that the unique combination of features recited in claim 1 including at least the claimed superpacket is absent from the Vargo’s reference.

An illustrative, non-limiting embodiment of the present invention shows that the switching unit of the core router can be increased from the cell size to a superpacket size, thereby allowing for sufficient switch connection calculation time even when the number of input and output interfaces increase.

Vargo addresses a completely different problem. In general, Vargo deals with the latency in voice over IP (VOI) systems. Vargo discloses a method of reducing latency in VOI systems by grouping packets together into one voice packet. In particular, Vargo teaches a number of gateways 114, 116 between the public switched telephone network and transmission multiplexer (transmux) 124. The gateway digitally encodes the voice data received from the originating PSTN 106 and then divides the encoded voice data into a plurality of voice packets 140. Moreover, the gateway 114 appends a destination gateway address and a destination transmux address to the voice packets 140. Next, it concatenates these voice packets 140 into unsorted transmux packet 142 upon receipt of a predetermined amount of voice data, which in turn is transmitted to the originating transmux 124 (col. 4, lines 6 to 24; col. 5, lines 5 to 21).

The transmux 124 received data packets 142 from a number of gateways and reorganizes these data packets 142 into voice packets 144 based on destination transmux. A predetermined number of voice packets are linked together to form a transmux packet 144. In addition, the destination transmux address is stripped off the packet 142 (col. 5, line 60 to col. 6, line 23). Thus, the more packets are to be routed to the destination transmux, the faster voice packets 144 will fill up, and the faster the voice packets will be sent. The voice packets 144 are routed over the internet network 132 using a conventional network technique (col. 6, lines 31 to 35).

However, Vargo technique is no different from the prior art discussed in the Application. For example, on page 12, lines 3 to 12 of the Application, a technique of grouping short packets having the same destination into a long packet and transferring it over network is discussed. Vargo's technique suffers the same problems discussed on pages 13-16 of the Application. That is, Vargo fails to improve the capacity of the switchbar section of the router, which switches cells of the fixed length.

Vargo only teaches sorting packets and transmitting them once a predetermined number of packets are accumulated (e.g. about 30). Vargo fails to teach or suggest that the size of this voice packet 144 is larger than a fixed-length cell. In addition, Vargo fails to teach or suggest having the superpacket be a switching unit of the relay means. In fact, Vargo is not concerned with the switching unit of relay means, instead the focus is on grouping packets and stripping them of identical headers.

In short, Vargo fails to teach or suggest that a voice packet is larger than a fixed-length cell and that the voice packet 144 is the switching unit of the relay means as opposed to conventional cells. This is simply not the focus of Vargo's teachings. Therefore, *a superpacket* as set forth in claim 1 is not suggested or taught by Vargo. For at least this reason, Applicant respectfully submits that independent claim 1 is patentably distinguishable from Vargo. Applicant, therefore, respectfully requests the Examiner to reconsider and withdraw this rejection of independent claim 1. Also, Applicant respectfully submits that claims 2-3 and 5-6 are allowable at least by virtue of their dependency on claim 1.

In addition, independent claims 7 and 18 contain features similar to the features argued above with respect to claim 1. Therefore, those arguments are respectfully submitted to apply with equal force here. For at least substantially the same reasons, therefore, Applicant submits that claims 7 and 18 are patentably distinguishable from Vargo. Also, Applicant respectfully submits that claims 8-9, 12, 15 and 17 are allowable at least by virtue of their dependency on claim 7 and claims 19-22 are allowable at least by virtue of their dependency on claim 18.

Moreover, with respect to claim 5 and claim 15, the Examiner asserts that Vargo discloses sending a packet 142 divisionally over a plurality of voice packets 144 (see page 4 of the office action). Applicant respectfully submits that this is technically inaccurate. Voice data is always transmitted in a continuous stream of data packets of equal, fixed size (e.g. see col. 1, lines 42 to 45). Vargo discloses aggregating voice packets received by their destination address and sending a voice packet 144, which will contain a number of data packets (preferably around 30), see e.g., Fig. 7; col. 5, lines 21 to 38. Vargo can determine the number of data packets to be send in a voice packet 144 ahead of time because the data packets are of fixed length. In short, Vargo's packets transmitted in the voice packet 144 are always smaller than the voice packet 144. That is, a single packet going to the same destination will never be split up over a number of voice packets 144. Therefore, claims 5 and 15 are patentable over Vargo for at least this additional reason.

III. Claim Rejections under 35 U.S.C. § 103(a)

Claims 4, 10, 11, 13, 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Vargo in view of U.S. Patent No. 6,247,058 to Miller et al (hereinafter "Miller"). Applicant

respectfully traverses this rejection with respect to the claim 4 dependent upon claim 1 and claims 10-11 and 13-14 dependent upon claim 7. Applicant has already demonstrated that Vargo does not meet all the requirements of independent claims 1 and 7. Miller is relied upon only for its teaching of time-outs. As such, clearly, Miller fails to cure the deficient teachings of Vargo. Together, the combined teachings of these references would not have (and could not have) led the artisan of ordinary skill to have achieved the subject matter of claims 1 and 7. Since claim 4 dependents upon claim 1 and claim 10, 11, 13 and 14 depend on claim 7, they may be patentable at least by virtue of their dependency.

IV. Allowable Subject Matter

Applicant thanks the Examiner for indicating that claim 16 would be allowable if rewritten in independent form. Applicant respectfully holds the rewriting of claim 16 in abeyance until the arguments presented with respect to independent claim 7 have been considered.

V. Conclusion

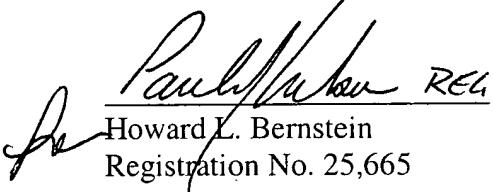
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Amendment Under 37 C.F.R. § 1.111
U.S. Application No.: 09/580,559

Attorney Docket No.: Q59423

Applicant hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,

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23373
CUSTOMER NUMBER

Date: March 18, 2004